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IN THE CLAIMS:

Please cancel claims 1-13 without prejudice or disclaimer, and substitute new
Claims 14-26 therefor as follows:

Claims 1-13 (Cancelled).

14. (New) A method of executing a neural network in a speech recognition
system for recognizing speech of an input speech signal organized into a series of
frames, comprising:

evaluating a distance between non-consecutive frames and selectively skipping
the run of the neural network in correspondence of at least one frame between said
non-consecutive frames; and

calculating said distance as a distance between output likelihoods of said neural
network.

15. (New) The method according to claim 14, comprising the steps of:

- a) buffering a plurality of input frames;
- b) defining an interval corresponding initially to a main interval of frames
delimited by a first and a second non-consecutive buffered frames;
- c) calculating, by means of said neural network, a first and a second
likelihood corresponding to the frames delimiting said interval;
- d) calculating a distance between said first and second likelihoods;
- e) comparing said distance with a predetermined threshold value and, in
case said distance is lower than said threshold value, calculating by interpolation
between said first and second likelihoods, the likelihood or likelihoods corresponding to

the frame or frames within said interval, or, in case said distance is greater than said threshold value, calculating, by means of said neural network, at least one likelihood corresponding to a frame within said interval; and

f) applying recursively said steps c) to e) to each interval present as a sub-interval within said main interval containing at least one frame whose likelihood has not been yet calculated, until all the likelihoods corresponding to the frames in said main interval have been calculated.

16. (New) The method as claimed in claim 15, wherein said interpolation is a linear interpolation.

17. (New) The method as claimed in claim 15, wherein said main interval of frames comprises said plurality of buffered input frames.

18. (New) The method as claimed in claim 15, wherein said likelihoods are probability distributions.

19. (New) The method as claimed in claim 18, wherein said distance between said first and second likelihoods is calculated as a symmetric Kullback distance between probability distributions.

20. (New) The method as claimed in claim 15, wherein said threshold value is a fuzzy set.

21. (New) The method as claimed in claim 20, wherein said fuzzy set has a domain corresponding to the percentage of output units of said neural network used by the current phonetic variability.

22. (New) The method as claimed in claim 21, wherein said fuzzy set is a linear segmented decreasing function.

23. (New) A computer program comprising computer program code means adapted to perform all the steps of any one of claims 14 to 22, when said program is capable of being run on a computer.

24. (new) The computer program as claimed in claim 23, embodied on a computer readable medium.

25. (New) A speech recognition system for recognizing speech of an input speech signal, according to the method of any one of claims 14 to 22, comprising:

a neural network for calculating likelihoods corresponding to frames of said input speech signal, comprising:

a buffer for storing a plurality of input frames;

a distance evaluation unit for calculating a distance between a first and a second likelihood, said first and second likelihoods being obtained by means of said neural network and corresponding to a first and a second non-consecutive buffered frames;

a comparing unit for comparing said distance with a predetermined threshold value; and

an interpolation unit for calculating, in case said distance is lower than said threshold value, the likelihood or likelihoods corresponding to the frame or frames between said first and second non-consecutive buffered frames.

26. (New) The speech recognition system according to claim 25, wherein said buffer is a lookahead buffer.